

COMMUNICATION

FOAM SCLEROTHERAPY and MIGRAINE with AURA

J.P. BÉNIGNI

SUMMARY

The increasing use of foam sclerosing agents is changing the practice of phlebology. In expert hands, side-effects are rare. However, the use of Polidocanol® foam for the treatment of telangiectases and reticular varicose veins appears to favour the appearance of migraine with aura. The course of this side-effect is usually stereotypical and without any after-effects. The frequency of this specific side effect is now quantified.

Keywords: foam sclerosing agent, telangiectases, reticular veins, migraine with aura, frequency.

MIGRAINE WITH AURA

In 1988, the International Headache Society published a classification [1] to facilitate the diagnosis of migraine with aura.

Migraine with aura is idiopathic and characterised by recurring disturbances manifesting in the form of neurological symptoms followed by headache.

During the course of an aura, the following disturbances are the most commonly reported:

- homonymous visual disturbances (broken lines, blurred scintillating image, scotoma);
- unilateral paraesthesia, numbness;
- unilateral paresis;
- aphasia or speech difficulties.

The neurological symptoms (visual, sensory, motor or dysphasic) appear gradually within 5 to 20 minutes and last less than 60 minutes.

The headache which follows (immediately or after a free interval of less than one hour) is unilateral, pulsatile, of severe to moderate intensity and aggravated by physical activity. It is often associated with nausea. Photophobia or phonophobia generally prolongs the symptoms of the aura, either immediately or after a free interval of less than one hour. The headache lasts from 4 to 72 hours, but may be completely absent.

The precise physiopathological mechanism is currently unknown [2]. Some researchers believe migraine aura represents the front of a travelling wave of excitation which is followed by a depression of the activity of the cortical cells during the headache. Others believe the headache is caused by a vasodilation of the cephalic vessels, either primitive in nature or secondary to a vasoconstriction during the aura.

The aetiology of migraine is unknown. The following causes have been proposed:

- genetic predisposition,
- hormonal influences in women,
- dietary factors (cheese, chocolate, red wine),
- psychological stress.

FOAM AND MIGRAINE WITH AURA

Polidocanol® foam is used as a sclerosing treatment in chronic venous disease. Generally, the injection of this product is well tolerated. Clinicians occasionally report "visual problems, amaurosis, scotoma, etc.", particularly after injection of reticular veins and telangiectases. The disturbances reported after injection with Polidocanol® are comparable with the migraine with aura well known to neurologists. A recent publication [3] has made it possible to confirm the nature of the undesirable effects observed, and to incorporate them into a nosological framework.

The patients (two men and two women) were aged between 43 and 53 years. Three of them had no reported history of migraine episodes. After a session of sclerosing injections of 2 ml Polidocanol® (from 0.125% to 0.2%)

for treatment of telangiectases and reticular veins, visual disturbances were described between 3 and 10 minutes after the end of the injections. The patients complained of visual disturbances (white spots, moving broken lines, blurred vision, kaleidoscopic effects, scintillations). The duration of these disturbances varied between a few minutes and 30 minutes. They were followed, for three out of four patients, by headaches developing to a maximum intensity over 3 hours. One of the four patients experienced no headache.

A case involving parietic migraine with aura without headache has been published more recently. [4].

FREQUENCY AFTER INJECTION OF FOAM

These 2 publications make it possible to relate these symptoms to a migrainous phenomenon, but they do not shed any light on the frequency of this phenomenon. The publication of a registry of the undesirable effects of sclerotherapy [5], relating to 12,173 sessions, has allowed us to evaluate its frequency at approximately one in a thousand.

DISCUSSION AND CONCLUSION

The causal mechanism is unknown. The following causes have been proposed:

- direct toxicity of the drug (Polidocanol® + air),
- migration of foam owing to the persistence of an oval foramen,
- liberation of vasoactive substances associated with massive destruction of the endothelium under the effect of the foam.

Further pharmaco-clinical work would be useful in order to determine the nature of the triggering mechanism (dosage of NO).

REFERENCES

- | | |
|---|--|
| 1 Olesen J. Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. <i>Cephalalgia</i> 1998; 8 (suppl. 7): 20-5. | 4 Benigni J.P., Herilavitra Ratinahirana H. Mousse de Polidocanol® and migraine with aura. <i>Phlébologie</i> , 2003; 56: 289-91. |
| 2 Allen C.M.J., Lueck C.J. Maladies du système nerveux. In: Davidson, Éd, Médecine interne. <i>Principes et pratique</i> , 1999; 936-7. | 5 Guex J.J., Allaert F.A., Gillet J.L., Chleir F. Immediate and midterm complications of sclerotherapy: report of a prospective multicenter registry of 12,173 sclerotherapy sessions. <i>Dermatol. Surg.</i> 2005; 31: 123-8. |
| 3 Ratinahirana H., Benigni J.P., Bousser M.G. Injection of polidocanol foam (PF) in varicose veins as a trigger for attacks of migraine with visual aura. <i>Cephalalgia</i> , 2003; 23: 850-1. | |